

**Clean Copy of Amended Claim**

---

1. (three times amended). A method for the determination of the presence of tetracycline in a liquid from a liquid or solid sample characterized in that
- the liquid is brought into contact with recombinant prokaryotic cells encompassing a DNA vector including a nucleotide sequence encoding a light producing enzyme under transcriptional control of a tetracycline repressor and a tetracycline promoter, wherein said tetracycline repressor is removed from the tetracycline promoter in the presence of tetracycline which causes said promoter to activate expression of said enzyme
  - detecting the luminescence emitted from the intact cells, and
  - comparing the luminescence emitted from said intact cells to the luminescence emitted from control cells brought into contact with a liquid lacking tetracycline
  - wherein a detectable luminescence higher than a luminescence of the control cells indicates the presence of tetracycline in the sample.
- 

3. (twice amended). The method according to claim 1 characterized in that the DNA vector is a plasmid containing luxCDABE genes (SEQ ID NO:3), tetracycline repressor (TetR) (SEQ ID NO:11) and tetracycline promotor (TetA) (SEQ ID NO:9) from *Tn10*.

4. (amended). The method according to claim 3 characterized in that the DNA vector is plasmid pTetLux1 (SEQ ID NO:3).

5. (twice amended). The method of claim 1 characterized in that the DNA vector is a plasmid containing an insect luciferase gene (SEQ ID NO:1), tetracycline repressor (TetR) (SEQ ID NO:11) and tetracycline promotor (TetA) (SEQ ID NO:9) from *Tn10*, and that

D-luciferin is added to the mixture of the sample and the cells in order to initiate the luminescence of the cells.

6. (amended). The method according to claim 5 characterized in that the DNA vector is plasmid pTetLuc1 (SEQ ID NO:1).

7. (twice amended). The method according to claim 1 characterized in that the presence of said tetracycline is determined by  
increasing or decreasing the concentration of divalent metal ions, e.g. magnesium ions, or  
adjusting the pH, or  
combined adjusting of the divalent metal ion concentration and the pH.

---

8. (three times amended). The method of claim 1 characterized in that the cells are antibiotic sensitive mutant strains.

9. (three times amended). The method of claim 1 characterized in that said luminescence is detected using an instrument selected from the group consisting of X-ray or photographic film, a CCD-camera, a liquid scintillation counter or a luminometer.

---

16. (amended). The method according to claim 2 characterized in that the DNA vector is a plasmid containing luxCDABE genes (SEQ ID NO:3), tetracycline repressor (TetR) (SEQ ID NO:11) and tetracycline promotor (TetA) (SEQ ID NO:9) from *Tn10*.

17. (amended). The method according to claim 16 characterized in that the DNA vector is plasmid pTetLux1 (SEQ ID NO:3).

18. (amended). The method according to claim 2 characterized in that  
- the DNA vector is a plasmid containing an insect luciferase gene (SEQ ID NO:1),  
tetracycline repressor (TetR) (SEQ ID NO:11) and tetracycline promoter (TetA) (SEQ ID NO:9)  
from *Tn10*, and that

- D-luciferin is added to the mixture of the sample and the cells in order to initiate the luminescence of the cells.

E4

19. (amended). The method according to claim 18 characterized in that the DNA vector is plasmid pTetLuc1 (SEQ ID NO:1).

---